

IN THE CLAIMS

1. (currently amended): An image forming apparatus comprising:

a plurality of image forming sections in which an electrostatic latent image is formed on a charged surface of an image bearing body and developed with toner into a visible image;

a transfer section that transfers the visible image onto a recording medium;

a fixing unit that fixes the visible image on the recording medium;

a temperature detecting section disposed in an area between said fixing unit and a one of said plurality of image forming sections closest to said fixing unit, said temperature detecting section not being in contact with said fixing unit, said temperature detecting section outputting a signal indicative of a temperature of a predetermined part of the image forming apparatus; and

a controller adapted to perform a cooling operation in which the temperature of the image bearing body is lowered when the signal is higher than a first predetermined value.

2. (original): The image forming apparatus according to Claim 1, wherein during the cooling operation, said controller controllably energizes a heater of said fixing unit for a predetermined fixing temperature.

3. (original): The image forming apparatus according to Claim 2, wherein said controller stops energizing the heater of said fixing unit during the cooling operation.

4. (original): The image forming apparatus according to Claim 2, wherein when the controller performs the cooling operation, said controller turns on and off the heater of said fixing unit with a first duty cycle;

wherein when the controller does not perform the cooling operation, said controller turns on and off the heater of said fixing unit with a second duty cycle higher than the first duty cycle.

5. (previously presented): An image forming apparatus comprising:

an image forming section in which an electrostatic latent image is formed on a charged surface of an image bearing body and developed with toner into a visible image;

a transfer section that transfers the visible image onto a recording medium;

a fixing unit that fixes the visible image on the recording medium;

a temperature detecting section that outputs a signal indicative of a temperature of a predetermined part of the image forming apparatus; and

a controller adapted to perform a cooling operation in which the temperature of the image bearing body is lowered when the signal is higher than a first predetermined value;

wherein during the cooling operation, said controller drives a medium-transporting mechanism of said fixing unit to rotate in an idling mode in which no printing is performed.

6. (original): The image forming apparatus according to Claim 5, wherein the said controller causes the medium- transporting mechanism to rotate at a higher speed in the cooling operation than in a normal printing operation.

7. (previously presented): An image forming apparatus comprising:

an image forming section in which an electrostatic latent image is formed on a charged surface of an image bearing body and developed with toner into a visible image;

a transfer section that transfers the visible image onto a recording medium;

a fixing unit that fixes the visible image on the recording medium;

a temperature detecting section that outputs a signal indicative of a temperature of a predetermined part of the image forming apparatus;

a controller adapted to perform a cooling operation in which the temperature of the image bearing body is lowered when the signal is higher than a first predetermined value; and

a belt adapted to rotate in contact with the image bearing body;

wherein during the cooling operation, said controller drives the belt and the image bearing body to rotate in an idling mode in which no printing is performed.

8. (original): The image forming apparatus according to Claim 7, wherein said controller drives the belt and the image bearing body to rotate at a higher speed in the cooling operation than in a normal printing operation.

9. (previously presented): The image forming apparatus according to Claim 7, wherein the temperature detecting section detects a temperature of the belt.

10. (original): The image forming apparatus according to Claim 7, wherein said image forming section is movable between an operative position at which the image bearing body is in contact with the belt and a non-operative position at which the image bearing body is not in contact with the belt;

wherein said controller causes said image forming section to move to the non-operative position when the cooling operation is activated.

11. (original): The image forming apparatus according to Claim 10, wherein during the cooling operation, said controller causes air to flow through a gap between said image forming section and the belt.

12. (previously presented): An image forming apparatus comprising:

an image forming section in which an electrostatic latent image is formed on a charged surface of an image bearing body and developed with toner into a visible image;

a transfer section that transfers the visible image onto a recording medium;

a fixing unit that fixes the visible image on the recording medium;

a temperature detecting section that outputs a signal indicative of a temperature of a predetermined part of the image forming apparatus;

a controller adapted to perform a cooling operation in which the temperature of the image bearing body is lowered when the signal is higher than a first predetermined value; and

a medium turning mechanism in which when the recording medium exits said fixing unit, the recording medium is turned over so that its under side becomes its top side;

wherein during the cooling operation, said controller causes the recording medium to pass through the medium turning mechanism in such a way that a same page of the recording medium passes under said image forming section a plurality of times but is not printed on.

13. (original): The image forming apparatus according to Claim 12, wherein the page of the recording medium is printed upon a print command subsequent to the cooling operation.

14. (original): The image forming apparatus according to Claim 12, wherein the page of the recording medium is discharged from the apparatus after the cooling operation.

15. (original): The image forming apparatus according to Claim 1, wherein said controller performs the cooling operation when the signal exceeds a threshold temperature,
wherein the threshold temperature is adapted to be set to a desired value.

16. (original): The image forming apparatus according to Claim 1, wherein before each page of the recording medium is printed on, said controller determines whether the cooling operation should be performed.

17. (original): The image forming apparatus according to Claim 1, wherein upon receiving a print job, said controller determines whether the cooling operation should be performed.

18. (original): The image forming apparatus according to Claim 1, wherein said controller terminates the cooling operation after the cooling operation is performed for a predetermined length of time.

19. (original): The image forming apparatus according to Claim 1, wherein said controller terminates the cooling operation when the signal is below a second predetermined value.

20. (original): The image forming apparatus according to Claim 1, wherein said temperature detecting section is located in the vicinity of the image bearing body to detect a temperature of an atmosphere surrounding the image bearing body, the signal indicating substantially the temperature of the image bearing body.

21. (canceled)